AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of simulating operation of a wireless communication network, the method comprising:

    a) defining a set of simulated base stations in a simulation of the wireless communication network;

    b) defining a set of simulated subscriber units;

    c) defining a set of subscriber types, each subscriber type being associated with an application and a desired data rate;

    d) assigning a subscriber type to each of the simulated subscriber units;

    e) for each simulated subscriber unit, determining whether the simulated subscriber unit can establish a communication link with a selected simulated base station at a desired data rate;

    f) if the simulated subscriber unit can not establish a communication link with a selected simulated base station at the desired data rate, determining whether the simulated subscriber unit can establish a communication link with the selected simulated base station at a reduced data rate.

2. (Original)   The method of claim 1 wherein the communication link is a reverse link channel.

3. (Currently amended) The method of claim 2 wherein determining whether the simulated subscriber unit can establish a communication link with the selected simulated base station at the desired data rate comprises:

a) determining the reverse link transmit power required to establish the reverse link channel at the desired peak data rate with the selected ~~the~~ simulated base station;

b) determining if the required reverse link transmit power is greater than an available transmit power for the simulated subscriber unit.

4. (Currently amended) The method of claim 3 wherein determining the reverse link transmit power required to establish the reverse link channel at the desired peak data rate with the selected ~~the~~ simulated base station comprises:

a) computing a sensitivity for the selected simulated base station based on the total received power at the selected simulated base station;

b) determining the reverse link transmit power required to transmit a signal from the simulated subscriber unit to the selected simulated base station on the reverse link channel so as to arrive at the selected simulated base station with power at least equal to the base station sensitivity.

5. (Currently amended) The method of claim 4 wherein determining the required reverse link transmit power further comprises determining a propagation loss from the simulated subscriber unit to the selected simulated base station and computing the reverse link transmit power based on the propagation loss and the base station sensitivity.

6. (Currently amended) The method of claim 5 wherein computing the sensitivity of the selected simulated base station comprises:

a) assigning a subset of the <u>simulated</u> subscriber units to the selected <u>simulated</u> base station;

b) determining, for each <u>simulated</u> base station, the total received power from a corresponding subset of <u>simulated</u> subscriber units.

7. (Currently amended) The method of claim 6 wherein assigning a subset of the <u>simulated</u> subscriber units to the selected <u>simulated</u> base station comprises determining, for each <u>simulated</u> subscriber unit, at least one selected <u>simulated</u> base station for which the <u>simulated</u> subscriber unit can establish a reverse link channel with minimal reverse link transmit power.

8. (Currently amended) The method of claim 4 wherein the simulation is performed over multiple iterations and wherein the base station sensitivity and reverse link transmit powers for the <u>simulated</u> subscriber units are recalculated in each iteration.

9. (Currently amended) The method of claim 4 wherein the total received power at each <u>simulated</u> base station is determined, in each iteration after the first iteration, from the required reverse link transmit powers for the <u>simulated</u> subscriber units computed in the prior iteration.

10. (Currently amended) The method of claim 1 wherein defining a set of <u>simulated</u> subscriber units comprises:

a) generating an initial set of <u>simulated</u> subscriber units;

b) for each simulated subscriber unit in the initial set of simulated subscriber units, determining whether the simulated subscriber unit can establish a communication link with at least one simulated base station;

c) eliminating simulated subscriber units from the initial set of simulated subscriber units that cannot establish a communication link with at least one simulated base station.

11. (Original) The method of claim 1 wherein the communication link is a forward link channel.

12. (Currently amended) The method of claim 11 wherein determining whether the simulated subscriber unit can establish a forward link channel with a selected simulated base station at the desired data rate comprises:

a) determining an available transmit power for the selected simulated base station;

b) determining the forward link transmit power required to establish the forward link channel between the simulated subscriber unit and the selected simulated base station; and

c) comparing the required forward link transmit power with the available forward link transmit power.

13. (Currently amended) The method of claim 12 wherein determining the available transmit power for the selected simulated base station comprises:

a) determining whether the subscriber type of the simulated subscriber unit;

b) determining the available transmit power based on the subscriber type of the

<u>simulated</u> subscriber unit.

14. (Currently amended) The method of claim 13 wherein determining the available transmit

power based on the subscriber type of the <u>simulated</u> subscriber unit. comprises:

a) determining whether the <u>simulated</u> subscriber unit is a voice user or a data user

based on the subscriber type of the <u>simulated</u> subscriber unit;

b) if the <u>simulated</u> subscriber unit is a voice user, determining the available transmit

power for voice users; and

c) if the <u>simulated</u> subscriber unit is a data user, determining the available transmit

power for data users.

15. (Currently amended) The method of claim 1 further comprising comparing the reduced data

rate to a minimum data rate for the application associated with the <u>simulated</u> subscriber unit to

determine whether the reduced data rate is acceptable for the application.

16. (Currently amended) A method of simulating operation of a wireless communication

network, the method comprising:

a) defining a set of <u>simulated</u> base stations in the wireless communication network;

b) defining a set of <u>simulated</u> subscriber units;

c) defining a set of subscriber types, each the subscriber type being associated with an

application and a desired peak data rate;

d) assigning a subscriber type to each of the simulated subscriber units;

e) for each simulated subscriber unit, determining the reverse link transmit power needed to acquire service with one or more selected simulated base stations at the desired peak data rate;

f) if the reverse link transmit power needed to acquire service with the selected simulated base stations at the desired peak data rate is greater than the maximum transmit power of the simulated subscriber unit, determining whether the simulated subscriber unit has sufficient power to acquire service with the selected simulated base stations at a reduced peak data rate.

17. (Currently amended) The method of claim 16 wherein determining the reverse link transmit power needed to acquire service with one or more simulated base stations at the desired peak data rate comprises:

a) computing a sensitivity for each of the selected simulated base stations based on the total received power at the selected simulated base stations;

b) determining the reverse link transmit power needed to transmit a signal from the simulated subscriber unit to the selected simulated base stations so as to arrive at the simulated base station with power at least equal to the base station sensitivity.

18. (Currently amended) The method of claim 17 wherein determining the reverse link transmit power further comprises determining a propagation loss from the simulated subscriber unit to the selected simulated base stations and computing the reverse link transmit power based on the propagation loss and the base station sensitivity.

19. (Currently amended) The method of claim 18 wherein computing the sensitivity of a selected <u>simulated</u> base station comprises:

a) assigning a subset of the <u>simulated</u> subscriber units to the selected <u>simulated</u> base stations;

b) determining, for each selected <u>simulated</u> base station, the total received power from a corresponding subset of <u>simulated</u> subscriber units.

20. (Currently amended) The method of claim 19 wherein assigning a subset of the <u>simulated</u> subscriber units to the selected <u>simulated</u> base stations comprises determining, for each <u>simulated</u> subscriber unit, at least one selected <u>simulated</u> base station for which the <u>simulated</u> subscriber unit can establish a reverse link channel with minimal reverse link transmit power.

21. (Currently amended) The method of claim 17 wherein the simulation is performed over multiple iterations and wherein the base station sensitivity and reverse link transmit powers for the <u>simulated</u> subscriber units is recalculated in each iteration.

22. (Currently amended) The method of claim 21 wherein a new subscriber distribution for said set of <u>simulated</u> subscriber units is used for each iteration, and wherein the total received power at each <u>simulated</u> base station is determined in each iteration is based on the new subscriber distribution.

23. (Currently amended) The method of claim 17 further comprising comparing the reduced data rate to a minimum data rate for the application associated with the <u>simulated</u> subscriber unit to determine whether the reduced peak data rate is acceptable for the application.

24. (Currently amended) The method of claim 17 wherein defining a set of <u>simulated</u> subscriber units comprises:

a) generating an initial set of <u>simulated</u> subscriber units;

b) for each <u>simulated</u> subscriber unit in the initial set of <u>simulated</u> subscriber units, determining whether the <u>simulated</u> subscriber unit can transmit an acceptable signal to at least one <u>simulated</u> base station on the reverse fundamental channel and the reverse pilot channel;

c) eliminating <u>simulated</u> subscriber units from the initial set of <u>simulated</u> subscriber units that cannot transmit an acceptable signal to at least one <u>simulated</u> base station on the reverse fundamental channel and the reverse pilot channel.

25. (Currently amended) A method of simulating operation of a wireless communication network, the method comprising:

a) defining a set of <u>simulated</u> base stations in the wireless communication network;

b) defining a set of <u>simulated</u> subscriber units;

c) defining a set of subscriber types, each the subscriber type being associated with an application and a desired data rate;

d) assigning a subscriber type to each of the <u>simulated</u> subscriber units;

e) for each <u>simulated</u> subscriber unit, determining whether the <u>simulated</u> subscriber unit can establish a forward link channel with a selected <u>simulated</u> base station at the desired data rate;

f) if the <u>simulated</u> subscriber unit can not establish a forward link channel link with the selected <u>simulated</u> base station at the desired data rate, determining whether the <u>simulated</u> subscriber unit can establish a forward link channel with the selected <u>simulated</u> base station at a reduced data rate.

26. (Currently amended) The method of claim 25 wherein determining whether the <u>simulated</u> subscriber unit can establish a forward link channel with a selected <u>simulated</u> base station at the desired data rate comprises:

a) determining the available transmit power for the selected <u>simulated</u> base station;

b) determining the forward link transmit power required to establish a forward link channel between the <u>simulated</u> subscriber unit and the selected <u>simulated</u> base station; and

c) comparing the required forward link transmit power with the available transmit power.

27. (Currently amended) The method of claim 26 wherein determining the available transmit power for the selected <u>simulated</u> base station comprises:

a) determining ~~whether~~ the subscriber type of the <u>simulated</u> subscriber unit;

b) determining the available transmit power based on the subscriber type of the <u>simulated</u> subscriber unit.

28. (Currently amended) The method of claim 27 wherein determining the available transmit power based on the subscriber type of the <u>simulated</u> subscriber unit. comprises:

a) determining whether the <u>simulated</u> subscriber unit is a voice user or a data user based on the subscriber type of the <u>simulated</u> subscriber unit;

b) if the <u>simulated</u> subscriber unit is a voice user, determining the available transmit power for voice users; and

c) if the <u>simulated</u> subscriber unit is a data user, determining the available transmit power for data users.

29. (Currently amended) The method of claim 25 further comprising comparing the reduced data rate to a minimum data rate for the application associated with the <u>simulated</u> subscriber unit and denying service on the forward link channel if the reduced peak data rate is less than the minimum data rate for the application.

30. (Currently amended) A computer readable media storing program code for simulating operation of a wireless communication network, the computer readable media comprising:

a) program code for defining a set of <u>simulated</u> base stations in the wireless communication network;

b) program code for defining a set of <u>simulated</u> subscriber units;

c) program code for defining a set of subscriber types, each the subscriber type being associated with an application and a desired data rate;

d) program code for assigning a subscriber type to each of the simulated subscriber units;

e) program code for determining whether the simulated subscriber unit can establish a communication link with a selected simulated base station at a desired data rate; and

f) program code for determining whether the simulated subscriber unit can establish a communication link with the selected simulated base station at a reduced data rate.

31. (Currently amended) The computer readable media of claim 30 wherein the program code for determining whether the simulated subscriber unit can establish a communication link with the selected simulated base station at the desired data rate comprises:

a) program code for determining the reverse link transmit power required to establish the reverse link channel at the desired peak data rate with the selected the simulated base station;

b) program code for determining if the required reverse link transmit power is greater than an available transmit power for the simulated subscriber unit.

32. (Currently amended) The computer readable media of claim 31 wherein the program code for determining the reverse link transmit power required to establish the reverse link channel at the desired peak data rate with the selected the simulated base station comprises:

a) program code for computing a sensitivity for the selected simulated base station based on the total received power at the selected simulated base station;

b) program code for determining the reverse link transmit power required to transmit a signal from the simulated subscriber unit to the selected simulated base station on the

reverse link channel so as to arrive at the selected <u>simulated</u> base station with power at least equal to the base station sensitivity.

33. (Currently amended) The computer readable media of claim 32 wherein the program code for determining the required reverse link transmit power further determines a propagation loss from the <u>simulated</u> subscriber unit to the selected <u>simulated</u> base station and computes the reverse link transmit power based on the propagation loss and the <u>simulated</u> base station sensitivity.

34. (Currently amended) The computer readable media of claim 33 wherein the program code for computing the sensitivity of the selected <u>simulated</u> base station assigns a subset of the <u>simulated</u> subscriber units to the selected <u>simulated</u> base station, and determines, for each <u>simulated</u> base station, the total received power from a corresponding subset of <u>simulated</u> subscriber units.

35. (Currently amended) The computer readable media of claim 34 wherein the program code for assigning a subset of the <u>simulated</u> subscriber units to the selected <u>simulated</u> base station determines, for each <u>simulated</u> subscriber unit, at least one selected <u>simulated</u> base station for which the <u>simulated</u> subscriber unit can establish a reverse link channel with minimal reverse link transmit power.

36. (Currently amended) The computer readable media of claim 32 wherein the program code executes over multiple iterations and wherein the base station sensitivity and reverse link transmit powers for the simulated subscriber units are recalculated in each iteration.

37. (Currently amended) The computer readable media of claim 32 wherein a new subscriber distribution for said set of simulated subscriber units is used for each iteration, and wherein the program code determines the total received power at each simulated base station in each iteration is based on the new subscriber distribution.

38. (Currently amended) The computer readable media of claim 30 wherein the program code for defining a set of simulated subscriber units comprises:

a) program code for generating an initial set of simulated subscriber units;

b) program code for determining whether each simulated subscriber unit can establish a communication link with at least one simulated base station;

c) program code for eliminating simulated subscriber units from the initial set of simulated subscriber units that cannot establish a communication link with at least one simulated base station.

39. (Currently amended) The computer readable media of claim 30 wherein the program code for determining whether the simulated subscriber unit can establish a forward link channel with a selected simulated base station at the desired data rate comprises:

a) program code for determining an available transmit power for the selected simulated base station;

b) program code for determining the forward link transmit power required to establish the forward link channel between the <u>simulated</u> subscriber unit and the selected <u>simulated</u> base station; and

c) program code for comparing the required forward link transmit power with the available forward link transmit power.

40. (Currently amended) The computer readable media of claim 39 wherein the program code for determining the available transmit power for the selected <u>simulated</u> base station comprises:

a) program code for determining ~~whether~~ the subscriber type of the <u>simulated</u> subscriber unit;

b) program code for determining the available transmit power based on the subscriber type of the <u>simulated</u> subscriber unit.

41. (Currently amended) The computer readable media of claim 40 wherein the program code for determining the available transmit power based on the subscriber type of the <u>simulated</u> subscriber unit[[.]] comprises:

a) program code for determining whether the <u>simulated</u> subscriber unit is a voice user or a data user based on the subscriber type of the <u>simulated</u> subscriber unit;

b) program code for determining the available transmit power for voice users; and

c) program code for determining the available transmit power for data users.

42. (Currently amended) The computer readable media of claim 30 further comprising program code for comparing the reduced data rate to a minimum data rate for the application associated with the <u>simulated</u> subscriber unit to determine whether the reduced data rate is acceptable for the application.

43-57. (Previously Withdrawn)